



**GRAND PORTAGE BAND OF CHIPPEWA
ENVIRONMENTAL DEPARTMENT
P.O. Box 428, Grand Portage, MN 55605**

Submitted Electronically

Minnesota Pollution Control Agency
PolyMet Draft NPDES SDS Comment – 4th Floor
520 Lafayette Road N St. Paul, MN 55155-4045

March 16, 2018

Re: Grand Portage comments on PolyMet draft NPDES SDS Permit MN0071013

Dear Minnesota Pollution Control Agency:

Thank you for opportunity to comment on the draft PolyMet NPDES SDS permit MN0071013. The Band is a federally recognized Indian tribe, as one of the member bands of the Minnesota Chippewa Tribe ("MCT"). The Band participated as a cooperating agency in the Environmental review of the PolyMet project, along with other MCT-member Bands, Fond du Lac and Bois Forte. All the Bands involved retain hunting, fishing, and other usufructuary rights that extend throughout the entire northeast portion of the state of Minnesota under the 1854 Treaty of LaPointe¹ (the "Ceded Territory"). In the Ceded Territory, all the Bands have a legal interest in protecting natural resources and all federal agencies share in the federal government's trust responsibility to the Bands to maintain those treaty resources.²

New Source Performance Standards

While the stated goal of this permit is to "reduce pollutant levels in point source discharges and protect water quality in accordance with the U.S. Clean Water Act, Minnesota statutes and rules, and federal laws and regulations," the draft permit lacks the required minimum federal effluent limits with the exception of SD01, the wastewater treatment plant discharge. As a new source,

¹ Treaty with the Chippewa, 1854, 10 Stat. 1109, in Charles J. Kappler, ed., *Indian Affairs: Laws and Treaties*, Vol. II (Washington: Government Printing Office, 1904), available on-line at <http://digital.library.okstate.edu/kappler/Vol2/treaties/chi0648.htm>

² See, e.g., Exec. Order 13175—Consultation and Coordination With Indian Tribal Governments (Nov. 6, 2000) (stating "the United States has recognized Indian tribes as domestic dependent nations under its protection . . . , there is a "trust relationship with Indian tribes," and "[a]gencies shall respect Indian tribal self-government and sovereignty, honor tribal treaty and other rights, and strive to meet the responsibilities that arise from the unique legal relationship between the Federal Government and Indian tribal governments.").

and a copper/nickel mine, the permit must include a daily maximum and monthly average limit for total suspended solids, copper, zinc, lead, mercury, arsenic, and pH for *all* surface water discharges. If the only permitted discharge will be SD01, all other groundwater and surface water monitoring locations at both the plant and mine sites listed in the permit must state that no discharge is authorized under the permit.

Lack of Surface and Groundwater Monitoring Locations

Near the mine site there must be additional surface monitoring locations. Above the confluence of Stubble Creek, the Partridge River is in very close proximity to the mine pit. Yet, the nearest monitoring locations are located upstream at SW402 and downstream at SW413 leaving a vast area in close proximity to the mine pit unmonitored. We recommend adding at least one surface water monitoring site on the Partridge River between SW413 and SW402 upstream of Stubble Creek.

Wyman Creek has no surface monitoring locations even though in MN water quality standards it is classified as a drinking water source and trout stream. Wyman Creek has been identified as impaired due to elevated temperature, low dissolved oxygen, and high concentrations of specific conductance, sulfate, total suspended solids, iron and iron precipitate.³ We recommend requiring a surface water monitoring location on Wyman Creek downstream of the railroad connection track.

The only surface monitoring location on Second Creek is SD026. Mitigation of high concentrations of sulfate, TDS, bicarbonates, total hardness, and specific conductance resulting from tailings basin leakage to Second Creek was included in the Cliffs Consent Decree. Second Creek was not one of the streams monitored during the St. Louis River Watershed Intensive monitoring effort that led to the St. Louis River Stressor Identification report. We recommend one additional surface monitoring location in Second Creek downstream of the Colby Lake Pipeline.

To increase the likelihood of identifying groundwater discharges, additional monitoring wells must be added near the equalization basins at the mine site, the Overburden Storage Layout Area (OSLA), the ore surge piles, north of the mine pits, and around the tailings basin. Parameters including copper, zinc, lead, mercury, arsenic and pH, must be included in addition to water level monitoring.

Reasonable Potential to Exceed

Determination of a reasonable potential to exceed water quality standards for the Lake Superior basin is based on comparing preliminary effluent limitations to projected effluent quality. "In all

³ St. Louis River Stressor Identification Report, MPCA, Dec. 2016.

cases, the permitting authority shall use any valid, relevant, representative information” to determine if there is a reasonable potential to cause or contribute to an exceedance of water quality standards.⁴ Where facility-specific effluent monitoring data is not available “the permitting authority shall specify the project effluent quality as of the distribution of the projected population of daily values of the facility-specific effluent monitoring data projected using a scientifically defensible statistical method that accounts for and captures the long-term daily variability of the effluent quality.”⁵ Based on this analysis the permitting authority must then set water quality based effluent limits if the projected effluent quality exceeds the preliminary effluent limitations to protect aquatic life, human health and wildlife from chronic effects and/or aquatic life from acute effects.⁶ However, MPCA, by their own admission and in violation of 40 CFR part 132, did not conduct a “quantitative” reasonable potential to exceed water quality standards analysis, and instead relied on a “qualitative” analysis that only included the projected water quality intentionally discharged from wastewater treatment plant.⁷ PolyMet will be purchasing the plant site from Cliffs. MPCA has provided that “A condition to closing on that purchase is that the NPDES/SDS permit and Consent Decree obligations held by CE for the Basin be assigned to PolyMet or one of its affiliates (together, “PolyMet”).”⁸ In clear violation of the Clean Water Act (CWA), MPCA stated “[I]t is important to note that operation of the proposed NorthMet project resolves any legacy water quality issues at the ferrous Basin.”⁹ Yet, there appears to be no plan to clean-up Spring Mine Creek, nor is there certainty that 95 percent of the seepage from the tailings basin can be collected and treated. PolyMet’s operation may resolve legacy pollution at the plant site, but this determination cannot be made until PolyMet is operational. Therefore, all pollutants, legacy or otherwise, known to exceed water quality standards must have a limit in the NPDES permit.

In the same memo¹⁰ MPCA provides discussion regarding groundwater issues including exceedances of arsenic, barium, aluminum, iron, manganese, and pH. The only groundwater exceedances that are explicitly dismissed are arsenic and barium since “an evaluation of tracer pollutants indicates these exceedances are not due to the Basin.”¹¹ This is in spite of the fact that MPCA has not ruled out stack emissions from the LTVSMC operation as one of the sources of groundwater exceedances of arsenic and barium.

⁴ 40 CFR Part 132, Appendix F, Procedure 5: Reasonable Potential to Exceed Water Quality Standards.

⁵ *Id.*, paragraph B.2.a.

⁶ *Id.*, paragraph B.2.a. through c.

⁷ Email from Jeff Udd, MPCA, to Margaret Watkins, Grand Portage, responding to a request for the MPCA’s reasonable potential analysis for the PolyMet NPDES permit, March 12, 2018.

⁸ Attachment O, draft permit to mine application, Legacy Permitting/Financial Assurance for Change in Assignment Former LTV Steel Mining Company (LTVSMC) Tailings Basin and Plant Site, Ann Foss, Metallic Mining Sector Director, December 12, 2017, pg. 2.

⁹ *Id.* pg.10.

¹⁰ *Id.* pg.4.

¹¹ *Id.* pg.4.

Surface water issues surrounding the tailings basin include exceedances of mercury, sulfate, alkalinity, hardness, TDS and specific conductance criteria. To dismiss these issues, MPCA incorporated multiple rationales including high priority rulemaking where proposed revisions could make criteria for alkalinity, hardness, TDS and specific conductance less stringent.¹² No treatment would be required for surface water sulfate exceedances because of the proposed wild rice rule revisions or the possibility of developing site specific criteria.¹³ Elevated mercury concentrations are “most likely due to influences from precipitation and background concentration, not from seepage from the existing Basin” and therefore would not be an issue.¹⁴ Minnesota surface water criteria have been exceeded in water samples collected near the tailings basin proposed for use by PolyMet.¹⁵ All permitted discharges within the vicinity of the tailings basin must have limits on mercury, sulfate, alkalinity, total dissolved solids (TDS), bicarbonates, total hardness, specific conductance, and iron, to ensure that they will not contribute to an existing excursion from water quality standards.

Impaired Waters

Within the Lake Superior basin, which includes the Project area waters, MN Water Quality Standards prohibit any new or expanded point source discharges of bioaccumulative substances of immediate concern including mercury.¹⁶ Moreover, Minnesota’s mercury TMDL process does not adequately address the fish consumption impairment in these waterbodies. Therefore, any new discharges that would result in further degradation to waters with an existing water quality impairment are not legally permissible under the CWA.¹⁷

Waters with known mercury impairments in the vicinity of the project including: the Embarrass and the Partridge Rivers; Embarrass, Sabin, Wynne, Esquagama and Colby Lakes, and; the Whitewater Reservoir.¹⁸ In spite of these impaired waters, neither the PolyMet Water Management Plans nor the draft permit to mine estimate concentrations of mercury in seepage from various locations where water will contact mine waste including the toe of the tailings basin, waste rock storage piles, ore surge piles, or the mine pits. Additionally, there has been no estimate of the amount of mercury that could seep from the unlined Overburden Storage Layout Area (OSLA), where mercury-containing peat will be stored.

¹² *Id.* pg.4.

¹³ *Id.* pg.4.

¹⁴ *Id.* pg.4.

¹⁵ April 6, 2010 Consent Decree between MPCA and CE.

¹⁶ MN WQS at 7052.0300 and 7052.0350.

¹⁷ See *Friends of Pinto Creek v. E.P.A.*, 504 F.3d 1007(9th Cir. 2007).

¹⁸ MPCA, Draft Impaired Waters List 2018, excerpt with St. Louis River, Lake Superior Basin 2018 Mercury Impaired Waters full listing at <https://www.pca.state.mn.us/water/minnesotas-impaired-waters-list>

In 2003, the Minnesota Department of Natural Resources (MNDNR) reported that taconite tailings appeared to be a sink for mercury in tailings basins in northern Minnesota. The loss of mercury through adsorption to solids in the tailings basin and subsequent burial in the sediments resulted in an overall permanent retention of mercury within the basin and decreases the mercury load released to receiving waters.¹⁹ However, mercury in the existing Cell 2E pond of the LTVSMC tailings basin has a concentration of 1.4 ng/L of mercury and water collected seeping out of the toe of the tailings basin has a concentration of 4.9 ng/L.²⁰ This contradicts the MNDNR²¹ by demonstrating that *mercury concentrations after seeping through the tailings do not decrease, in fact the concentration more than triples.*

PolyMet estimates that 164 pounds of mercury will be deposited in the Hydrometallurgical Residue Facility (HRF) each year.²² This estimate is accompanied by an assumption that none of the mercury in the HRF will be released into the environment into perpetuity.

Mercury releases into the environment go beyond the wastewater discharge, and include deposition of dust contaminated with mercury originating from the Project. Using cross media analysis the spread of dust from the facility was examined to determine the potential for contamination of water and wetlands through deposition.²³ Dust deposition resulting from blasting at the mine site and wind erosion from the Category 1 waste-rock stockpile were excluded from this analysis. Further, MPCA did not consult with their own in-house experts and was unconcerned about the concentrations of mercury in dust. This lack of concern was based on speculation and assumed, without scientific data, that mercury is bound to dust and therefore would not be released into the environment.

PolyMet has predicted that the concentration of total sulfide mineral dust deposition could exceed 1,000 milligrams per square meter per year, or four times more than the predicted concentration of the deposition to the "wetland of interest". Yet, this prediction was made for areas at the mine site where water will be draining into the "wetland of interest" without discussing how a particular downstream wetland could legitimately receive just one-quarter of the predicted sulfide mineral dust deposition. The effect from sulfide mineral dust deposition on stormwater mercury methylation was not estimated in this analysis, or the effect that might have on wetlands with high concentrations of sulfate reducing bacteria. Mercury deposition into wetlands, where high sulfur concentrations can greatly increase methylation of mercury should have received more scrutiny.

¹⁹ FEIS 5-228, 5-229.

²⁰ FEIS 4-126, Table 4.2.2-23.

²¹ Berndt, et al. 2003.

²² PolyMet Facility Mercury Mass Balance Analysis (RS66) (March 2007).

²³ MPCA, Cross-Media Analysis to Assess Potential Effects on Water Quality from Project-Related Deposition of Sulfur and Metal Air Emissions, Oct. 31, 2017.

Without the estimates of mercury releases from dust, stormwater, the OSLA, ore surge piles, waste-rock stockpiles, mine pits, and toe of the tailings basin, the FEIS stated that, based on mercury mass balance analyses, the Project is predicted to result in an overall net decrease of mercury loadings of approximately 1.0 grams per year to the St. Louis River. This is accomplished by a decrease of 1.2 grams per year in the Partridge River and a net increase of 0.2 grams per year in the Embarrass River.²⁴

While SD01 permit limits include mercury, the concentrations are one-thousand times higher than MPCA Lake Superior Basin Water Quality Standards allow.²⁵ However, there are no mercury discharge limits in the NPDES permit or the Stormwater Construction General Permit for the OSLA. All surface water discharges must include mercury limits that are consistent with Great Lakes mercury criterion.

Specific conductance limits are not included in the draft permit. Yet, Spring Mine and Wyman Creeks, and the Embarrass and Partridge Rivers are known to have aquatic life impairments resulting from high concentrations of specific conductance.²⁶ Therefore, all permitted discharges must have specific conductance limits that that comply with Minnesota's 7050 rule.

Tailings Basin Seepage

PolyMet's seepage capture rates are unrealistic and cannot be demonstrated by any other project that has been cited as a reference. Predicted tailings basin seepage capture system efficiency rates are:

100 percent of the Tailings Basin's surface seepage; 100 percent of the groundwater approaching the containment system from the Tailings Basin's east and south toes, and; 90 percent of the groundwater approaching the containment systems from the Tailings Basin's north, northwest and west toes (PolyMet 2015d).²⁷

PolyMet's claim that 90 percent or more of the seepage from this tailings basin can be captured is unrealistic, to say the least. Tribes requested any example of the "90 percent or better" capture efficiency rate to be provided by the Co-Lead Agencies, but they were not able to provide a single example anywhere in the world.²⁸ Instead, just one citation was provided from an EPA guidance document that stated:

²⁴ FEIS, A-416.

²⁵ MN0071013, p. 70 (monthly average 1,000 ng/l, daily max. 2,000 ng/l), MPCA 7052 rule (applicable chronic standard 1.3 ng/l) <https://www.revisor.mn.gov/rules/?id=7052.0100>

²⁶ MPCA, St. Louis River Watershed Stressor Identification Report, Dec. 2016, pp. 22, 33, available at <https://www.pca.state.mn.us/sites/default/files/wq-ws5-04010201a.pdf>

²⁷ FEIS 5-186.

²⁸ Band's Cmts. on SDEIS at Ex. C. (ERM Responses to Action Items From January 27 Cooperating Agency Meeting (Feb. 11, 2014)).

*"Most barriers in the study have been in place for fewer than 10 years; therefore, long-term performance can only be extrapolated...All sites included in the study were existing sites that had vertical barriers and, in many cases, caps. None of the sites has an engineered bottom barrier. Therefore, the effect of leakage through aquitards was not evaluated in this study."*²⁹

The same report also indicated that "10% of the containment systems reviewed failed to meet the performance objectives and required corrective action, and 19% of the evaluated facilities did not have sufficient data to conclude whether the containment system was operating successfully or not."³⁰ In other words, even the Co-Leads' own authority did not support a 90 percent capture efficiency rate. Further, tailings ponds in Fort McMurray, Alberta, Canada, are cited by PolyMet as an example of successful seepage containment:

*"Another example is the installation of a soil-bentonite cutoff wall around the perimeter of a mine tailings pond located in the province of Alberta, Canada. The cutoff wall is approximately 100-feet deep and 3 feet wide, and has a hydraulic conductivity of less than 1×10^{-7} cm/sec. The cutoff wall was used to isolate the tailings pond from down gradient surface water features including wetlands and the Athabasca River."*³¹

Unfortunately, Environment Canada, a federal agency, published research in 2014 that substantiates that the Athabasca River has been contaminated by toxic chemicals seeping from Alberta's tar sand tailings ponds in spite of the fact that ditches, cutoff walls, groundwater interception wells, and water pump back systems were used to prevent the seepage pollution from occurring.³² One of the two leaky tailings ponds studied reportedly seeps toxic wastewater at a rate of approximately 2.65 cubic feet per second, or more than 625 million gallons per year, into the Athabasca River.³³ So this example is actually the *opposite* of "successful seepage containment."

Other examples of similar proposals show similarly poor results. The Zortman-Landusky Mine in Montana installed containment and pump-back systems to be used in conjunction with a wastewater treatment facility. However, they "did not capture all surface and subsurface drainage."³⁴ The Molycorp, Inc. Mine site in New Mexico concluded that "[t]he pathway for

²⁹ EPA, Evaluation of Subsurface Engineered Barriers at Waste Sites, Vols. 1 and 2, available at <http://www.epa.gov/remedytech/evaluation-subsurface-engineered-barriers-waste-sites-volumes-1-and-2>

³⁰ *Id.*

³¹ PolyMet 2015h, Attachment D, at 1-2.

³² Frank et al., Profiling Oil Sands Mixtures from Industrial Developments and Natural Groundwaters for Source Identification, Env. Sci & Tech. accepted Jan. 21, 2014, at <http://www.thetyee.ca/Documents/2014/02/21/Profiling-Oil-Sands-Mixtures.pdf>

³³ Bob Weber, *Federal study says oil sands toxins are leaching into groundwater, Athabasca River*, Edmonton Globe and Mail, at <http://www.theglobeandmail.com/news/national/federal-study-says-oil-sands-toxins-are-leaching-into-groundwaterathabasca-river/article17016054/>

³⁴ EPA, Costs of Remediation at Mine Sites (Jan. 1997); 4.2.12; Case Study No. 12 at 34,

contaminant migration is the leaching of tailing seepage downward from the tailing facility to *ground water that migrates through fractures* to surface water.”³⁵ Therefore, no credible support for PolyMet’s claim of seepage capture rates by these means has been provided or has been found.

Yet, MPCA has promoted the idea that as long as groundwater seepage from the tailings basin does not exceed 500 gallons/acre/day (greater than 2 million gallons per day), the basin is permissible because it is “equivalent to an engineered lined system with respect to release of seepage to groundwater.”³⁶ Further, as long as the facility does not leak polluted groundwater at rates higher than 500 gallons/acre/day the tailings basin *would not be subject to NPDES/SDS requirements*,³⁷ without having to address the hydrologic connection between groundwater and surface water flow at the site. In order to evaluate the need for permit coverage for the facility, MPCA will “seek evidence the facility will not have a statistically significant impact on sulfate in receiving waters...groundwater quality standards can be met at the facility property boundary, [and] all applicable surface water quality standards can be met in surface waters at the facility.”³⁸ However, no exemptions exist in the CWA that constrain NPDES permit coverage to “excess” wastewater discharges that are estimated to have a “statistically significant” impact on receiving waters at the property boundaries. US EPA has clearly articulated to MPCA and PolyMet that failure to obtain NPDES coverage for discharges of pollutants to waters of the United States would place the discharger at risk of violating the CWA.³⁹ 40 CFR § 122.21(a)(1), “Duty to apply,” requires that “any person who discharges or proposes to discharge pollutants...and who does not have an effective permit...must submit a complete application to the Director in accordance with this section and part 124 of this chapter.” 40 CFR § 122.21(c) states that “Persons proposing a new discharge are encouraged to submit their applications well in advance of the 90 or 180 day requirements to avoid delay.” Simply applying for a permit does not provide the coverage needed to authorize discharges of pollutants to surface waters under the CWA. Yet, MPCA has not included any groundwater or surface water discharges beyond the wastewater treatment plant for the plant site or the tailings basin.

describing the Zortman-Landusky Mine, Montana,

<http://www.epa.gov/wastes/hazard/tsd/ldr/mine/costs.pdf>

³⁵ EPA, Molycorp, Inc. Site, Proposed Cleanup Plan (December 2009)

http://www.epa.gov/region6/6sf/newmexico/molycorp/nm_molycorp_proposed_cleanup_plan.pdf

³⁶ Memo from Ann Foss, MPCA, to Bill Johnson, MDNR, “Minnesota Pollution Control Agency Staff Recommendations on Impact Criteria Related to the Permittability of the Proposed PolyMet Tailings Basin,” June 20, 2011.

³⁷ *Id.*

³⁸ *Id.*

³⁹ EPA email attachment to MPCA regarding NPDES permit requirements for PolyMet, April 7, 2015.

Residential Wells

MPCA's groundwater standards prohibit any discharges that could pollute groundwater, limit or preclude using groundwater as a drinking water source.⁴⁰ MPCA has conflated polluted tailings basin groundwater with natural background conditions. "Data shows groundwater quality is generally better than applicable groundwater standards at the property line. For aluminum, iron, manganese and pH, natural background exceeds the groundwater criteria. For arsenic and barium, an evaluation of tracer pollutants indicates these exceedances are not due to the Basin."⁴¹ Even if arsenic and barium concentrations are not due to the Basin, they may be related to stack emissions from LTVSMC and must be addressed along with manganese, aluminum and sulfate.⁴² Fourteen residential wells located between the tailings basin and the Embarrass River were identified during the environmental review of the PolyMet project. Minnesota rule 7060.0200 states that "[I]t is the policy of the agency to consider the actual or potential use of the underground waters for potable water supply as constituting the highest priority use and as such to provide maximum protection to all underground waters...For the...prevention of possible health hazards, it is necessary and proper that the agency employ a nondegradation policy to prevent pollution of the underground waters of the state." Many of the residential wells exceed the Health Risk Limit for manganese. In high concentrations, manganese is a potent toxin that is known to cause Parkinson's like symptoms. PolyMet's contaminant transport modeling suggested that the project will cause manganese, aluminum and sulfate to exceed drinking water standards. In the monitoring wells near the tailings basin, pollutants including iron, sulfate, manganese, aluminum, and fluoride already exceed drinking water standards.⁴³ Therefore, drinking water limits for arsenic, barium, sulfate, manganese, aluminum and fluoride should be included in groundwater monitoring locations between the tailings basin the residential wells to ensure that further degradation of potable groundwater does not occur.

Mine Site Seepage

Similar to the tailings basin, MPCA and PolyMet contend that there will be no seepage from the mine pits, waste-rock stockpiles, ore surge piles, or OSLA, that will not be captured and treated by the wastewater treatment facility. Because there is no federal minimum seepage requirement that triggers the need for a permit, capturing 95 percent of the seepage from the tailings basin and 99 percent from the mine site simply means *PolyMet is planning on violating federal rules, and MPCA is allowing these violations*. The draft permit states "[T]here will be no discharge of mine

⁴⁰ 7060.0600 rule Subp. 2. Prohibition against discharge into unsaturated zone.

⁴¹ Attachment O, draft permit to mine application, Legacy Permitting/Financial Assurance for Change in Assignment Former LTV Steel Mining Company (LTVSMC) Tailings Basin and Plant Site, Ann Foss, Metallic Mining Sector Director, December 12, 2017, pg. 4 of 10.

⁴² See, e.g., Minn. R. 7050.0220; 7050.0221 (Class 1 waters (domestic consumption): manganese 50 ug/l, aluminum 200 ug/l).

⁴³ MPCA Memo: Compliance Schedule Report, Cliffs Erie, LLC Hoyt Lakes Tailings Basin Area NPDES Permit #MN0054089 (Dec. 19, 2002).

water or other process wastewater to surface waters from the Mine Site.”⁴⁴ This statement excludes groundwater seepage that has a direct connection to surface water. In fact, in terms of prohibiting a discharge from the mine site, the draft permit only excludes direct discharges to surface water:

“This permit does not authorize the direct discharge to surface waters from the High-Concentration, Low-Concentration and Construction Mine Water Pipelines.”⁴⁵ This permit does not authorize a direct discharge from the Mine Site Equalization Basins or any other industrial mine water pond system to surface waters.”⁴⁶

This is a great concern because the FEIS presented the sulfur concentrations of Project waste rock ranging between 0.01- 5.0%⁴⁷ with an average mass-weighted concentration of 0.15%. The Virginia Formation has the highest concentrations of sulfur, 0.4-5.0%, and the Duluth Complex, 0.13-0.6% sulfur. These concentrations are much higher than in Montana’s Zortman-Landusky Mine waste rock (0.2% sulfur)⁴⁸ that has already required perpetual wastewater treatment. And, like the project proponent in Zortman-Landusky, the Project proponent has suggested that “most (70 percent) of the NorthMet waste rock would be the low-sulfur, non-acid-generating” and will never cause acid mine drainage. However, the north wall of the east pit is composed of the Virginia Formation (sulfur concentration 0.4 -5%) meaning that it will be exposed to both air and water and will likely contribute a substantial load of sulfate and metals to mine pit water. Twenty-feet of pit wall will never be submerged and as such constitutes a perpetual source of mine related contaminants.⁴⁹

PolyMet claims bedrock transport of contaminated water is negligible due to the very low bulk hydraulic conductivity of bedrock and that groundwater flow rates in these flowpaths were not large enough to affect water quality at the groundwater and surface water evaluation locations.⁵⁰ Modeled projections of the rate and volume of flow of polluted water from the mine pits suggest that it could take 17-34 years after the commencement of mining for pollutants to reach the Partridge River.⁵¹ A potential that was not considered in model development for the mine site was the possibility that pollutants may be discharged to wetlands in close proximity to the mine site. The possibility also exists that pollution from mine features, including the pits, may reach the Partridge River more quickly than predicted because pollutant flow paths may not be exclusively underground, or travel time may be reduced as a result of pressurized fracture flow.

⁴⁴ Draft NPDES Permit pg. 5.

⁴⁵ Draft NPDES Permit pg. 52 § 6.11.9.

⁴⁶ Draft NPDES Permit pg. 53 § 6.12.2.

⁴⁷ FEIS 5-6, 5-60.

⁴⁸ See Band’s Cmts. on DEIS at Ex. E (Financial Assurance for Hardrock Mine Cleanup).

⁴⁹ FEIS 3-64.

⁵⁰ FEIS 5-63.

⁵¹ See SDEIS Table 5.2.2-26.

Although the draft permit requires groundwater monitoring for both the mine site and the plant site, there are no permit limits for groundwater. It appears that MPCA will only require PolyMet to apply for NPDES coverage at the mine site if monitoring results indicate that there is, or will be, a discharge of pollutants to surface waters. However, this does not comply with Minnesota rules or the Clean Water Act. A complete NPDES permit application must include information detailing when and where pollutants originating from the mine site will enter surface waters.⁵² Even if PolyMet could ensure that monitoring would detect a potential discharge to surface waters before a discharge occurred this would still violate Minnesota rules.

MPCA has stated that if an unauthorized discharge occurs the agency *may* pursue enforcement action.⁵³ Further, MPCA put forth two options to address an unauthorized discharge in the permit: “1) there could be a new permit limit in an adjustment to the permit, or 2) discharge would need to stop.” The option to stop a discharge may not be possible; therefore this is simply not adequate and does not comply with Minnesota rules or the Clean Water Act. If PolyMet insists that there will be no unauthorized discharges to surface water and therefore does not apply for adequate NPDES permit coverage, MPCA must pursue enforcement actions for noncompliance and add new permit limits for all discharge points not previously included in the permit.

Conclusion

NPDES permits must include numeric and/or narrative effluent limitations necessary to protect water quality standards of the receiving waters, as well as any limitations necessary to ensure that downstream water quality standards are protected.⁵⁴ MPCA’s groundwater standards prohibit any discharges that could pollute groundwater, limit or preclude using groundwater as a drinking water source.⁵⁵ Therefore, all authorized discharges to groundwater and surface water must have limits that comply with new source performance standards and limit the concentrations of pollutants that are known to exceed water quality standards. Since there is no federal minimum seepage requirement that triggers the need for a permit, capturing most of the seepage from the tailings basin and mine site simply means *PolyMet is planning on violating federal rules*. By not requiring permit limits at all external monitoring locations, MPCA is sanctioning these *violations of federal rules*. If after operations begin, it is determined that PolyMet has erroneously concluded there will be no discharges to surface or groundwater, MPCA must swiftly pursue appropriate enforcement actions against the company for violating the CWA.

⁵² 40 CFR §§ 122.21 and 124.3.

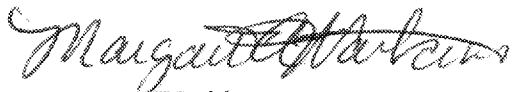
⁵³ MPCA, PolyMet Tribal Consultation Questions, March 9, 2018, pg. 3.

⁵⁴ 40 CFR § 122.44(d).

⁵⁵ 7060.0600 rule Subp. 2. Prohibition against discharge into unsaturated zone.

Although Grand Portage is not specifically requesting a contested case hearing, we reserve the right to participate if a contested case hearing is ordered.

Sincerely,

A handwritten signature in cursive script, appearing to read "Margaret Watkins".

Margaret Watkins
Grand Portage Water Quality Specialist

Cc. Kevin Peirard, US EPA
Barbra Wester, US EPA
Krista McKim, US EPA